

REMARKS

Entry of this amendment and reconsideration of the present application, as amended, are respectfully requested.

Claims 26, 27, 29-75 and 77-87 are presently active in this application, claims 1-25, 28 and 76 having been cancelled. Claims 26-43, 45, 46, 48, 50-75 and 77-84 were rejected and claims 44, 47 and 49 were indicated as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

It is noted that the Examiner did not address claims 85-87 in the Office Action, these claims having been added by the amendment dated November 18, 2002. An indication of the status of these claims is respectfully requested in the next communication regarding this application.

Claims 26, 62 and 74 are amended herein. However, in spite of these amendments, applicant reserves the right to traverse the Examiner's rejections of the claims as previously set forth and the Examiner's positions set forth in the Office Action, e.g., by filing a continuation application with such claims. Also, unless mentioned below to distinguish the claimed invention over the cited prior art, the changes to claims 37, 52, 63, 63 and 74 do not relate to patentability.

Rejections under 35 U.S.C. §102

Claims 26, 27, 29-31, 33-36, 62, 63, 68, 70-74 and 79-84 were rejected under 35 U.S.C. §102(b) as being anticipated by Smittle et al. (U.S. Patent No. 3,770,315).

With respect to claims 26, 27, 29-31 and 33-36, independent claim 26 has been amended to include the features of claim 28, namely, the frame being coupled to a seat of the vehicle and extending upward from a top of the seat such the cushioning arrangement constitutes a headrest. This feature is not disclosed, taught or suggested by Smittle et al.

With respect to claims 62, 63, 68, 70-74 and 79-84, independent claims 62 and 74 have been amended to recite that at least a part of the frame is arranged in the interior of the cover. As shown in Fig. 8A, the frame is a support 805 which is arranged in the interior of the cover 810 as well as in the interior of the bag 815.

Smittle et al. shows a lumbar support 14 including an impermeable bag 16 surrounding foam 19. The seat has a reclining back 12 made of foam 20 having a cavity into which the lumbar support 14 is positioned.

In contrast to the embodiments of the invention now set forth in claims 62 and 74, Smittle et al. does not disclose any part of the frame being arranged inside of a deformable cover.

In addition, the Examiner's statement that a deformable cover inherently surrounds the frame 12

and bag 16 is respectfully traversed on the grounds that as clearly shown in Fig. 2, the bag 16 is the outermost element of the lumbar support 14 and is not surrounded by an additional deformable cover.

In view of the changes to claims 26, 62 and 74 and the arguments presented above, it is respectfully submitted that the Examiner's rejection of claims 26, 27, 29-31, 33-36, 62, 63, 68, 70-74 and 79-84 as being anticipated by Smittle et al. has been overcome and should be removed.

Rejections under 35 U.S.C. §103

Claims 37-43, 45, 46, 48 and 50-59 were rejected under 35 U.S.C. §103(a) as being unpatentable over Matsuura (U.S. Patent No. 3,770,315) in view of Breed (Great Britain Patent No. 2289786). The Examiner stated that Breed suggests moving a cushioning arrangement toward an occupant and Matsuura shows the use of a pre-inflated cushioning arrangement prior to contact by a user. The Examiner took a position that it would have been obvious to modify the vehicle of Matsuura with an anticipatory crash sensor as taught by Breed.

The Examiner's rejection is respectfully traversed because there is absolutely no teaching or suggestion in the cited prior art to provide a movable, pre-inflated cushioning arrangement which is moved or movable toward an occupant upon a determination by an anticipatory crash sensor that a crash involving the vehicle is about to occur, as set forth in independent claims 37 and 52.

Matsuura and Breed, taken individually, do not disclose, teach or suggest a pre-inflated airbag, i.e., one which contains a fluid such as air and is able to cushion an occupant's impact, which is movable toward a likely position of an occupant based on a determination by an anticipatory crash sensor that a crash involving the vehicle is about to occur. Matsuura and Breed, taken individually, also do not disclose, teach or suggest moving a pre-inflated cushioning arrangement into contact with the occupant upon a determination that a crash involving the vehicle is about to occur.

The Examiner alleges that Breed suggests moving a cushioning arrangement toward an occupant (Office Action at page 5). However, Breed suggests only inflating a cushioning arrangement (an airbag) to thereby cause the airbag to move toward the occupant, i.e., the inflation of the airbag causes the airbag to move toward the occupant, and there is no movement of the airbag apart from the inflation. Otherwise, Breed does not disclose movement of a pre-inflated cushioning arrangement toward an occupant or even moving a completely inflated cushioning arrangement toward an occupant. Rather, it is the inflation itself which imparts movement of the cushioning arrangement toward the occupant.

Matsuura shows a stationary, arguably pre-inflated cushioning arrangement.

There is absolutely no teaching, suggestion or motivation to combine or modify Matsuura to include an anticipatory crash sensor as disclosed in Breed. In fact, one skilled in the art would not be motivated to combine Matsuura with an anticipatory crash sensor because the Matsuura cushioning

arrangement is not movable and thus the determination of an impending crash would not be of any value to the Matsuura system. That is, the determination of an impending crash could not cause movement of the cushioning arrangement of Matsuura because the cushioning arrangement is not movable. The determination of an impending crash would have absolutely no import on the Matsuura system and therefore would be entirely superfluous.

Moreover, since Breed shows an inflating airbag with the inflation being started based on the determination of an impending crash by an anticipatory crash sensor, the absence of an inflating airbag in Matsuura would defeat the entire purpose of the anticipatory crash sensor of Breed.

For the foregoing reasons, one skilled in the art would not be motivated to use an anticipatory crash sensor in combination with the cushioning arrangement of Matsuura.

In view of the arguments presented above, it is respectfully submitted that the Examiner's rejection of claims 37-43, 45, 46, 48 and 50-59 under 35 U.S.C. §103(a) as being unpatentable over Matsuura in view of Breed has been overcome and should be removed.

Claims 26-36, 50-55, 62-75 and 77-84 were rejected under 35 U.S.C. §103(a) as being unpatentable over Nakanishi (U.S. Patent No. 4,744,601) in view of Smittle et al.

The Examiner's rejection is respectfully traversed on the grounds that Nakanishi and Smittle et al. do not disclose all of the features of independent claims 26, 52, 62 and 74. The reasons for the inclusion of claims 50 and 51 in this rejection is unclear since the base claim, claim 37, is not included in this rejection.

With respect to claims 26-36, claim 26 recites constraining means arranged in a fluid-containing bag for constraining flow of fluid from one portion of the bag to another portion of the bag. In the disclosed embodiment, the constraining means is open cell foam having channels 842 arranged to provide a flow path between the upper and lower portions of the bag 815. As such, when the occupant comes into contact with the cushioning arrangement, fluid within the bag flows substantially within the bag to change the shape of the bag so as to approximately conform to the head and neck of the occupant. A force on the head and neck of the occupant is thereby provided to substantially accelerate both the head and neck at substantially the same acceleration in order to minimize whiplash injuries (claim 32).

Nakanishi and Smittle et al. do not disclose, teach or suggest channels formed in open cell foam and thus do not disclose the same constraining means as described in the specification.

With respect to claims 52-55, Nakanishi and Smittle et al. do not disclose, teach or suggest determining that a crash involving the vehicle is about to occur and moving a pre-inflated cushioning arrangement into contact with the occupant upon a determination that a crash involving the vehicle is about to occur. No mention is made in either of these references about anticipatory sensing.

With respect to claims 62-73, Nakanishi and Smittle et al. do not disclose, teach or suggest a single fluid-containing bag in an interior of a cover and with respect to claims 74, 75 and 77-84, Nakanishi and Smittle et al. do not disclose, teach or suggest a fluid-containing bag occupying the entire interior of a cover with the cover surrounding the bag.

In Nakanishi, there are three substances in the headrest 23, one is an elastic base part 21, one is an elastic support wall 22 and the last is a gel material layer 24. There is no cover surrounding the headrest 23. In Smittle et al., the bag 16 is not surrounded by any cover.

Thus, both Nakanishi and Smittle et al. lack a disclosure of a cover surrounding a fluid-containing bag with the fluid-containing bag being the only one in the interior of the cover or occupying the entire interior of the cover.

Moreover, with respect to claims 72 and 83, Nakanishi and Smittle et al. do not disclose channels formed in open cell foam for constraining the flow of fluid in a fluid-containing bag. With respect to claims 68-70 and 79-81, Nakanishi and Smittle et al. do not disclose, teach or suggest channels formed in open cell foam and thus do not disclose the same constraining means as described in the specification.

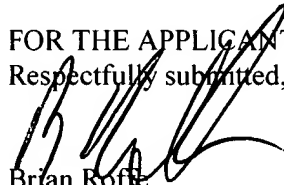
In view of the arguments presented above, it is respectfully submitted that the Examiner's rejection of claims 26-36, 50-55, 62-75 and 77-84 as being unpatentable over Nakanishi in view of Smittle et al. has been overcome and should be removed.

If the Examiner should determine that minor changes to the claims to obviate informalities are necessary to place the application in condition for allowance, the Examiner is respectfully requested to contact the undersigned to discuss the same.

Applicant hereby petitions for a one-month extension of time to extend the time for response to the Office Action dated February 27, 2003 for one month from May 27, 2003 to June 27, 2003. The petition fee of \$55.00, applicant having qualified for small entity status, should be charged to Deposit Account No. 50-0266.

An early and favorable action on the merits is earnestly solicited.

FOR THE APPLICANT
Respectfully submitted,



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